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By-Nelson, Charles R.; And Others

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EVALUATION OF ELEMENTARY SCHOOL PLANT

CHARLES R. NELSON

Deputy Superintendent for Elementary Education
Houston, Texas

CAMERON FAIRCHILD

Consulting Architect
Houston Public Schools

ROSALIE W. FARLEY

President, 1963-64,
Department of Rural Education, NEA

SHIRLEY COOPER

Director of Inservice Education, AASA

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EVALUATION

CHARLES R. NELSON

I do appreciate the opportunity of coming here and sharing with you tonight some of the reactions to the elementary schools that you are visiting, particularly the Northline School today and the Pat Neff School tomorrow. They are two different types of architecture and have many different features, and yet many things are alike.

PRINCIPAL-TEACHER RELATIONSHIP TO BUILDING PROGRAM

We make an effort to relate to the building program the ideas and opinions of teachers and principals and supervisory staff members who work with the instructional program. As we were picking up steam in building elementary schools several years ago, we asked every elementary principal to prepare for a series of meetings by talking with their faculties. Meanwhile, we would attempt to make a listing of some of the minimum standards that should be considered as they related to the instructional program for the architect and contractors to build the schools in the future. Over a period of two years we had forty to fifty meetings where deliberations were conducted concerning the matter of minimum standards. Finally, we had a major session. In fact, it was a two-day session in one of the newest elementary schools that we had. All of the principals were present and we went from pillar to post and through all parts of the building trying to be sure our communications were clear, trying to identify what we felt was the consensus on standards we felt would be good to list. We made such a listing then and used it for a year or two and then revised it. At the present time, it is serving as a guide to the people who are working in the building program.

It isn't an easy thing to get a consensus from that large a number of people. It is not an easy thing for the architect to make such a listing and to move forward in making plans from them. We realize that this involves a lot of communication, a lot of flexibility, and adjustment. However, we feel that it is better than if we had not made that effort. This listing will be revised in the future as changes are made in the program.

I should note that in looking at those specifications and being very close to them and in looking at the schools that have been built the last forty to fifty years, there are many innovations in our newer schools. At

the same time, we are aware that in our older schools there are many fine specifications that are still being found in the new schools. We feel that in the olden days, so to speak, the persons who were in charge of the building programs at the time had a lot of foresight and did very well in relating school building to the instructional program at the time.

CURRENT COOPERATIVE PLANNING

Concerning the preliminary plans of schools, you will be interested to know how we worked with principals and teachers related to the new schools and the additions that are being planned for the next year. In the first place, a good number of people select where the new schools and additions are being built and where the new sites are needed. This involves all members of the building committee which is composed of all of the deputy superintendents, the superintendents, and the directors for elementary and secondary schools. We work together in trying to determine the needs of a school district. When it gets down to the identification of those additions and new schools, the principal involved meets with the directors to work on the preliminary plans and I brought a number one exhibit yesterday—for example, Mr. Fletcher, passed on to our department these plans to review again which have been reworked several times by the architect, see to it that this building, as it will be built and ready for use in September 1965, will meet the needs of our instructional program as closely as possible within the budget available. This takes a lot of coordination and finding time to work together, but we slow this process down so that when the building is compieted there is a closer relationship between the building and the program, as well as fewer gripes regarding changes that certain people desire.

PLANT AND PROGRAM

Teachers and principals ask me when they move into a new school, "What is flexible and functional about this school?" It isn't an easy question to answer unless you are an expert in explaining questions of that type. As we talk about it tonight, Mr. Fairchild and I may have some difficulty in being as clear as we would like to.

First, you can see various ways in our physical plants where the board policies, the teaching of geography and history, is reflected. In the teaching of art, reading, arithmetic, types of facilities, quarters for the music program, art program, library program, you can see a direct relationship between those schools and the current board policy. As board policy changes we immediately try to have our newer schools reflect them and, of course, as we make additions we try to make those policies affect them also.

This might represent to you a point of view as to how we react to some of the newer changes in the instructional program, perhaps team teaching. Team teaching is an effort to improve the instructional program and as far as we are concerned, we are not too sure of its benefits. So we have made some minor modifications in plans as we are making a study of the values to be derived. We have been flexible enough to try a third type of plan. The first plan for team teaching was actually in the physical facilities about a year ago. The second plan will be in the next round of buildings and the third type of physical arrangements for this purpose will be in the latest building built.

We hesitate to rush headlong into system-wide changes in the building program for such changes taking place in education today, because (1) they are very expensive and (2) we are not certain of the values to be derived from these changes. But we do feel as though we have to be making some modifications to determine whether or not these changes will be effective in the future and will be made system-wide at that time. The outdoor patios at Northline are changes that are for the good. We found that the children react well to those. They provide flexibility for the spaces that are occupied for the instructional program.

We have some other changes that are taking place in the classrooms where we need a different shape because we want more variety of activity. We want movable furniture and space to move it: We need areas for nests of chairs. We have a policy limiting the enrollment of kindergarten children. Where we used to have larger numbers of children in each section, we have fewer children; therefore, we have changed the space arrangement there. Our libraries are undergoing changes because of the changes in policy. Tremendous purchases of books demand some physical changes in that program. So, flexibility is interpreted along that line as far as I am concerned.

EVALUATIONS OF NORTHLINE AND PAT NEFF SCHOOLS

Now, about Northline and Neff schools as far as the way principals, teachers, parents and the pupils report their reactions—these observations are reported to us by the principals. We weren't able to go to the parents, pupils, or teachers. That is what we pay the principals to do for us and we assume that they are quite valid in their reactions.

First, they report that the appearance is great, appealing to all and the color effects are outstanding.

Secondly, the outdoor facilities are delightful. The amphitheatre that

you will see at Pat Neff School gives an opportunity for team teaching and outdoor-indoor instruction.

Third, the size and shape of the rooms provide more variety and classroom activities. The folding doors give great flexibility to program, for demonstrations, small meetings, PTA groups and exhibits.

Fourth, the rooms are secluded and quiet. This is very good for instruction but it is difficult for the administration.

Five, storage facilities are much improved in flexibility and functional use.

Sixth, the pupils are inspired to better citizenship and inspired to achieve better school progress. Both principals are reporting this. They are very frank on this statement too.

Seventh, they still have problems with drainage and acoustics, with questions about single-hung windows, noisy fans for hot weather, bad weather effects on corridors, open passageways, etc.

Eighth, the lighting is much better and progress is noted in ventilation.

Ninth, generally, these schools have better structure, improved appearance, better administrative suites, less monotony, more flexible spatial arrangements and generous public approval, compared with the schools that these same principals occupied previously.

DESIGN COMPETITION FOR AN ELEMENTARY SCHOOL BUILDING

CAMERON FAIRCHILD

OBJECTIVE:

To build a series of elementary school buildings from plans that reflected the best thinking on ways to achieve optimum effectiveness of elementary buildings as a learning and as a teaching environment.

It was felt that the most effective way to make available to the Houston Independent School District the best concepts regarding this objective would be through a competition open to all local licensed architects. Basic requirements were as follows:

PROGRAM:

The Problem "To design an Elementary School Building for the designated site (plat attached) with consideration given as to how this same plan with minor modification might be used on the three additional sites (plat attached); and consisting of 28 classrooms, kindergarten, cafetorium and kitchen, office suite, teachers' lounge, pupils' rest rooms, together with the other appurtenances and facilities designed as an environment to bring forth the best responses of the pupils of this age group, and to increase the effectiveness of the teacher and teaching techniques.

"The quest is for the practical rather than for the bizarre. The emphasis is on the learning process. The building and its parts should be architecturally beautiful as the result of logic in plan, propriety of proportions, the color and texture of materials.

"Cost is a factor. Square footages of the several parts of the whole plant are mandatory, together with projected cost estimates making up a total budget of not more than $470,000 for construction. This will be subject to check by competent authority.

"Currently the following space criteria prevail and have been found satisfactory:

Classrooms—750 square feet
Kindergarten—900 square feet
Auditorium to seat 400 or to accommodate 300 as a lunchroom. A stage.
Kitchen and its appurtenances—approximately 1,400 square feet
Office Suite: Principal's office—250 square feet
Secretary's office—300 square feet
Clinic—250 square feet
Library—900 square feet
Teachers' Workroom—200 square feet
Audio-visual store room—100 square feet
Book room of approximately 400 square feet
Teachers' Lounge (300 square feet) and two rest rooms
Rest Rooms for Pupils (two for girls; two for boys).
Hallways and Corridors that enable pupils to go from one part of the building to another without exposure to the elements.
Suitable entrances to the building; direct access to Kindergarten
Custodian's Room—250 square feet
Steam or hot water heating system
Adequate ventilation

Noise control
Hard-surfaced play area
An incinerator
Faculty Parking Lot
Bicycle Parking Lot

"Areas used after noon should be oriented to exclude the sun. The future use of central air conditioning should be considered. In the choosing of materials the matter of insurance rate, construction and maintenance costs and safety of the children should be given careful analysis. The use of fireproofed and flameproofed materials is mandatory. The use of unprotected steel bar joists is not recommended. Provide direct or emergency exit from each classroom.

"It is recommended that contestants familiarize themselves with problems in maintenance, vandalism, and housekeeping that prevail."

THE RESULTS:

48 entries were submitted for evaluation by a jury of awards consisting of architects Charles T. Granger of Austin, and E. Davis Wilcox of Tyler, Texas, both of whom are of acknowledged and proven ability in the field of school-building architecture, and Glenn Fletcher, Deputy Superintendent, HISD.

These three men have several characteristics in common that qualified them as perceptive and unbiased evaluators of the entries that were submitted. Each of them had broad experience in school building programs as related to educational programs administered under the authority of a governing Board. Each had arrived at that maturity of judgment based on experience and understanding of the history of building and of education so that they avoided the pitfall of accepting the radical merely because it seems to be a new, fresh and untried approach to the problem; nor did they follow the beaten path with their attention so riveted that they failed to see the potential of another better route.

Initially, they eliminated those submittals that were obviously slanted in their attempt to appeal to the sense of the familiar. Next they eliminated those submittals that failed to take cognizance of, or to show familiarity with, educational ways and means as approved by the Board of Education governing the HISD, under democratic process.

More than twenty proposed solutions exemplifying concepts of real merit remained, and it was only after much debate and weighing of merits for three days that the Jury of Awards ranked the first, second and third place entries and cited five others as being superior.

You have seen or will see three or more of these school buildings,

diverse in plan and in appearance to a degree that must be seen to be fully appreciated. Yet each fulfills the requirements of the HISD for a specific school plant on a specific site. These varying valid approaches contributed to the improvement of our educational environment; focused attention on the objectives of building; and put building techniques and detail into better perspective.

New architectural talent has been afforded opportunity to show its abilities, and older established firms have demonstrated that they do indeed produce works that are of today.

Out of this competition has come an analytical trend predicated on the retention of those facilities that function satisfactorily as educational environment: the introduction of facilities for teaching techniques to be tried on a limited basis; and the expanding and improvement of these new techniques as they prove their worth.

We do not anticipate further use of the competition method for selecting architects, although it has marked merit and served to stimulate the evolutionary trend just mentioned. There are elements of time and expense involved for both the District and the Architects that tend to make its repeated use impractical.

As is often the case, a byproduct turns out to be of greater value than the original objective. Out of this competition has developed a method for evaluating architects based on their capabilities, predicated on their past performance for HISD as well as other clients. This evaluation indicates their ability to work with staff members directly concerned with the building program, to achieve a meld of the new techniques in both education and construction, to be introduced into the building program with judicious enthusiasm to the updating and improvement of both.

THE FUTURE:

The Competition for the Design of an Elementary School Building for the HISD served well in its purposes of bringing the teacher, the staff, the Board of Education and the architect into a cohesive and fluid force for the betterment of our educational facilities. Had we achieved this situation a few years ago, we might now have an answer to the insistent problem of coping with explosive population growth, where the process of consolidating into greater densities requires schools where land is expensive and scarce, and at a time when the school must again assume its role as the source of ethics, ideals and behavior customs, as it has done so often in the past.

Part of the answer may be in the intriguing display of components for school building construction that we have here from California.

We know what we need. We need fluidity in facilities to meet the demand that may, or may not, come from today's prairie that may be a residential development with X number of school-age children three years from now; for the demand that may, or may not, come from the high-rise living facilities that are filling in vacant plots in the central parts of Houston. Components? Transportable classrooms? Multi-story school buildings? Where does our answer lie?

During World War II, I had a part in the developing of an Air Force Training technique that allowed machine gunners in bombers to train by firing at our own pursuit airplanes in sham aerial battle. No one was to get hurt. We didn't know how to accomplish this, but it was done by theorists in physics, chemical physicists, ballistics experts, pilots, and a host of others. The day of the solo researcher is past. Through the mutual concern of educators, architects, engineers, and others working *together* to this end, the answer will be found to school building problems too.

EVALUATION

ROSALIE W. FARLEY

I would like to stop thinking about a building for a moment and start thinking about a book. At one time we published books with dark covers, with few pictures, with many words, because we didn't want to waste any of the pages. We thought the more we could cram between the two covers the better the book would be. As a result, we had very few children being stimulated or even trying to open the covers of the books. We have learned, in publishing books, that we must make the covers attractive enough that a child will pick up the book and then put between the covers some ideas, some personality and some events.

As I have been sitting here this evening I have been thinking that the elementary building that I saw this afternoon reminded me of a book, in the sense of the newer kind of building which would make any person delighted to go between the doors. A child seeing a building such as that

would no longer have the attitude that he is now in an institution or a warehouse or some of the other monstrosities that we call schools. I think this was a tremendous experience. But I am more concerned about what happens after we get inside the building.

A beautiful building could be a shell; but while walking and talking with the teachers and with the youngsters, I was certain that a quality of education is taking place within this building that all of us could commend. I couldn't help but be impressed with the attitudes of the youngsters and the relationships of the teachers with the youngsters and with other teachers. We had an opportunity to visit, but the real evaluation comes when we see how persons are actually using the building. I don't know whether we just happened to have been present when the community was using the building or not but I suspect that this was not a unique experience.

A second reaction which I had was that the Northline School is definitely planned for this district. It has all of the earmarks which I would expect to find in the South. We could not have a building of this sort in our part of the country—nor should we. We would have youngsters enjoying the piles of snow that would have been driven by the wind during some of our blizzards. However, we should not be concerned about duplicating buildings. We should build buildings for the site, for the location.

I was wondering, and I did hear reference to this point, if it would be possible to use a court for outdoor education and I understand that this is included in the program. With the beauty around Northline School I would envision some dramatic experiences in literature, in drama, music and reading. I would want to take the youngsters outdoors; I would want to have some of the classes around that beautiful fountain, and I would suspect that it will have water in it sometime. I would hope that the youngsters would have a chance to look out of the windows and to enjoy the world outside. In fact, we are going to be giving more attention to the learning activity outside the four walls than we have in the past. I suspect that I am saying a few kind words so I can ask a few questions.

I am wondering about the increased amount of glass that is being used in elementary buildings. I would like to see some research on this topic. I am wondering about the cost of keeping the glass clean. I am wondering about breakage, and glare. We were in two classrooms in which we had difficulty reading the work on the boards—not because there was too much sunlight; but because the writing on the board was blurred. In fact, in parts we couldn't see at all. But I was very encouraged to note that some of these problems could be controlled through supervision. There could have been a reshifting of the seats, or a different type of chalk used. I think what we need to do is ask ourselves some very serious questions. What are the advantages as far as construction is concerned

with so much glass in the classroom? I also would be interested in knowing how a classroom teacher takes advantage of this particular treatment.

Then there was another question I was concerned about. We saw some excellent work counters being used for bookshelves. I am wondering if it would be possible to have running water and some electrical outlets. What kind of a science program is being carried on in the classroom? One which is dependent upon reading or one which is dependent upon experimentation? Now, I grant, I wasn't in the room long enough to answer these questions.

I am a little concerned about the limited amount of floor space. If we are to include centers of interest such as library corners, which would create some free reading, we will need floor space. If we are to have centers of interest for the various humanities, we need floor space. In one classroom we noticed that the whole line of seats was pressed against the wall. I question whether 750 square feet is ample space for a classroom. I believe that we are going to have more footage if we are to have the kind of a program that would involve activity of large groups, small groups, or individual activity. There are other ways of handling these activities. Perhaps the joining of classrooms, and such, but I am throwing these points out as questions.

To summarize, I have only three points in mind. I think that we need more persons who are courageous enough to try to do something differently; to try to find answers to some of the questions which are being raised. I think that the kind of research and experimentation that is being carried on here in Houston could be repeated all over the nation. That is, we will try out in one building or two buildings, one or two different approaches to determine whether or not we would want to include them in the total school system. This particular attempt to use the pilot study plan goes beyond the mere fact of saving dollars. To me it means that we are not going to be satisfied with what someone says from someplace but we are going to find satisfactory answers for our own school system. I think it most gratifying to know that the people here in Houston are demanding satisfaction before they will repeat a particular act. I am impressed with the amount of vision and imagination in these buildings. I could put up with all of these other technical points if we could have more of this type of building being created because someone wants to go beyond that which is traditional. Again, let me say I deeply appreciate these experiences.

EVALUATION

SHIRLEY COOPER

I suppose that the perfect school building has not been built yet and perhaps never will be. It will be unfortunate if it ever is built. So we have a chance to put it into use and look at it a little. As we do we see some things we might have done differently if we had to do it over. But, even if today we had a perfect school building, perfect in every respect, next year it would be slipping just a little bit because conditions are changing. So this job of forever looking for a final, better answer as long as we are a dynamic society and trying to move forward will never be finished.

The interesting thing about the discussion I heard this evening is that somehow you have thought that the potential that will bring about a better building year after year will come out of the lives of the people with whom you are working. These men have illustrated at considerable length how they have turned to the teaching staffs, to the principals, to the supervisors, and they have used every possible device to get the best ideas of what ought to be in an educational program and what ought to go into the building. Then they turn to a group of architects to get from them in an uninhibited manner all the creativity they can possibly draw out of a number of different men—a way to seek the best answer from all the people.

There was a time in this country when administration was, and called itself, well educated and in a great many places believed that the answers to most of these things resided in the individual administrators or the small group of them. This was not only in school building planning, but in a lot of other things. Now, we see a shift taking place here when the administrators' real role, as these men have so well demonstrated, is to devise ways and means of using the creative leadership potential that resides in a lot of people, and bring it to bear on the solution of the problem. They take a look at what exists and if it's not quite the answer they want they start all over again.

I, too, liked the little elementary school that we saw this afternoon. I liked it tremendously, as soon as I got out of the bus and looked at it. I would like to have my kids go there. I wanted to go in. I know it is not a perfect school. The lecturer said we would do a few things over. The architect said we would do a few things over. That is the way we grow. We look at something that we have done and then we move right ahead.